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| 09/977,194 | 10/16/2001 | Atsushi Kota | Q66658 | 3620 |

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| ART UNIT | PAPER NUMBER |
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| 2673 | |

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | | Application No. | Applicant(s) |
|---|---|---|---|
| **Office Action Summary** | | 09/977,194 | KOTA ET AL. |
| | | **Examiner** | **Art Unit** | |
| | | Prabodh M Dharia | 2673 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>04 October 2004</u>.

2a)☐ This action is **FINAL**.  2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>16 October 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10-16-01,07-17-03</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

1.      **Status:** Receipt is acknowledged of papers submitted on 10-04-2004 under amendments

have been placed of record in the file. Claim 1–20 are pending in this action.

## *Claim Rejections - 35 USC § 103*

2.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.      Claims 1-14,17,18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuda

(6,380,689 B1) in view of Nakano et al. (6,043,818) and Hashimoto et al. (6,072,457).

        Regarding Claim 1, Okuda teaches a picture displaying apparatus (Col. 1, Lines 6-10,

Lines 15-18), comprising: a plurality of scanning lines to which scanning signals are inputted

(Col. 3, Lines 30-34, Lines 35-37), respectively; a plurality of data lines to which data signals are

inputted, respectively (Col. 3, Lines 30-34, Lines 40-43); a light emission element disposed at

each of a plurality of intersections (Col. 3, Lines 30-34, Col. 1, Lines 6-9, Col. 1, Line 65 to Col.

2, Line 14) composed of the plurality of scanning lines and the plurality of data lines (Col. 3,

Lines 30-34); a picture displaying unit having the plurality of light emission elements (Col. 1,

Lines 6-10, Lines 15-18); and a memory unit storing a single display data indicative of an

display content of the picture displaying unit (Col. 3, Line 29), and wherein the memory unit has

a plurality of memory cells (Col. 3, Lines 46-48), and wherein each of the plurality of memory

cells stores a unit display data of a part of the single display data (Col. 3, Lines 49-55), and

wherein a plurality of the unit display data stored in the plurality of memory cells (Col. 3, Lines 46-55).

However, Okuda fails to teach memory are read from the memory unit in a different order for each single predetermined frame or each plural predetermined frames, and wherein the plurality of unit display data are written to the picture displaying unit in an order when the, plurality of unit display data are read from the memory unit, such that the display content in the picture displaying unit is different for the each predetermined frame or frames.

However, Nakano et al. teaches memory are read from the memory unit in a different order for each single predetermined frame or each plural predetermined frames, and wherein the plurality of unit display data are written to the picture displaying unit in an order when the, plurality of unit display data are read from the memory unit, such that the display content in the picture displaying unit is different for the each predetermined frame or frames (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3) (during screen saver routine the CPU only accesses the screen saver program where it is displaying rotating image stored in the memory, since different part of the image to be displayed different position on the display it requires to read frame by frame basis information in the different order and the display content in the picture displaying unit is different for the each predetermined frame or frames).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Nakano et al. in Okuda teaching to be able to select and display a unique image during screen saver program and protect the display screen from burn-in.

Okuda teaches a picture displaying apparatus (Col. 1, Lines 6-10, Lines 15-18).

However, Okuda fails to teach memory read from the memory unit in different order for each single predetermined frame or each plural predetermined frames

However, Hashimoto et al. teaches memory read from the memory unit in different order for each single predetermined frame or each plural predetermined frames (Col. 13, Lines 1-27, Col. 13, Line 57 to Col. 14, Line 26, Col. 14, Lines 35-41).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Hashimoto et al. in Okuda teaching to be able to select and display a unique image and to be able to have flexibility to display the image signal of various standards on a single display.

Regarding Claim 2, Nakano et al. teaches when the plurality of unit display data are read from the memory unit, at least one specific memory cell among the plurality of memory cells is used as a read start position and the plurality of unit display data are read in accordance with an arrangement order of the plurality of memory cells from the specific memory cell, and wherein the specific memory cell is changed for the each predetermined frame or frames (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3) (during screen saver routine the CPU only accesses the screen saver program it has stored specific rotating display images specific memory cells, where it is displaying rotating image stored in the memory, since different part of the image to be displayed different position on the display it requires to read frame by frame basis information in the different order and the display content in the picture displaying unit is different for the each predetermined frame or frames).

Regarding Claim 3, Nakano et al. teaches a part of the plurality of unit display data is

changed before the part of the plurality of unit display data is read from the memory unit, and

wherein the plurality of unit display data including the changed part of the plurality of unit

display data are read from the memory unit in the different order for the each predetermined

frame or frames, and wherein the plurality of unit display data including the changed part of the

plurality of unit display data are written to the picture displaying unit, in accordance with the

order when the plurality of unit display data are read from the memory unit (Col. 13, Lines 16-

26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3) (during screen saver routine the

CPU only accesses the screen saver program it has stored specific rotating display images

specific memory cells, where it is displaying rotating image stored in the memory, since different

part of the image to be displayed different position on the display it requires to read frame by

frame basis information in the different order and the display content in the picture displaying

unit is different for the each predetermined frame or frames).


Regarding Claim 4, Nakano et al. teaches a part of the plurality of unit display data is

changed before the part of the plurality of unit display data is read from the memory unit, and

wherein the plurality of unit display data including the changed part of the plurality of unit

display data are read from the memory unit in the different order for the each predetermined

frame or frames, and wherein the plurality of unit display data including the changed part of the

plurality of unit display data are written to the picture displaying unit, in accordance with the

order when the plurality of unit display data are read from the memory unit (Col. 13, Lines 16-

26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3) (during screen saver routine the

CPU only accesses the screen saver program it has stored specific rotating display images

specific memory cells, where it is displaying rotating image stored in the memory, since different

part of the image to be displayed different position on the display it requires to read frame by

frame basis information in the different order and the display content in the picture displaying

unit is different for the each predetermined frame or frames).

Regarding Claim 5, Okuda teaches a picture displaying apparatus (Col. 1, Lines 6-10,

Lines 15-18), comprising: a plurality of scanning lines to which scanning signals are inputted

(Col. 3, Lines 30-34, Lines 35-37), respectively; a plurality of data lines to which data signals are

inputted, respectively (Col. 3, Lines 30-34, Lines 40-43); a light emission element disposed at

each of a plurality of intersections (Col. 3, Lines 30-34, Col. 1, Lines 6-9, Col. 1, Line 65 to Col.

2, Line 14) composed of the plurality of scanning lines and the plurality of data lines (Col. 3,

Lines 30-34); a picture displaying unit having the plurality of light emission elements (Col. 1,

Lines 6-10, Lines 15-18); and wherein the picture displaying unit (Col. 1, Lines 6-10, Lines 15-

18), has a plurality of pixels corresponding to the plurality of light emission elements (Col. 1,

Line 65 to Col. 2, Line 4, Col. 3, Line 64 to Col. 4, Line 2, Col. 3, lines 49-58), and wherein each

of the plurality of memory (Col. 3, Line 29) cells stores (Col. 3, Lines 49-51) a unit display data

(Col. 3, Lines 51-55) of a part of the single display data (Col. 3, Lines 49-56), and wherein the

unit display data is written to each of the plurality of pixels (Col. 3, lines 55-58)and wherein the

memory unit has a plurality of memory cells (Col. 3, Lines 46-48), and wherein each of the

plurality of memory cells stores a unit display data of a part of the single display data (Col. 3,

Lines 49-55), and wherein a plurality of the unit display data stored in the plurality of memory cells (Col. 3, Lines 46-55).

However, Okuda fails to teach memory are read from the memory unit in a different order for each single predetermined frame or each plural predetermined frames, and wherein the plurality of unit display data are written to the picture displaying unit in an order when the, plurality of unit display data are read from the memory unit, such that the display content in the picture displaying unit is different for the each predetermined frame or frames.

However, Nakano et al. teaches memory are read from the memory unit in a different order for each single predetermined frame or each plural predetermined frames, and wherein the plurality of unit display data are written to the picture displaying unit in an order when the, plurality of unit display data are read from the memory unit, such that the display content in the picture displaying unit is different for the each predetermined frame or frames (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3) (during screen saver routine the CPU only accesses the screen saver program where it is displaying rotating image stored in the memory, since different part of the image to be displayed different position on the display it requires to read frame by frame basis information in the different order and the display content in the picture displaying unit is different for the each predetermined frame or frames).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Nakano et al. in Okuda teaching to be able to select and display a unique image during screen saver program and protect the display screen from burn-in.

Okuda teaches a picture displaying apparatus (Col. 1, Lines 6-10, Lines 15-18).

However, Okuda fails to teach memory read from the memory unit in different order for each single predetermined frame or each plural predetermined frames

However, Hashimoto et al. teaches memory read from the memory unit in different order for each single predetermined frame or each plural predetermined frames (Col. 13, Lines 1-27, Col. 13, Line 57 to Col. 14, Line 26, Col. 14, Lines 35-41).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Hashimoto et al. in Okuda teaching to be able to select and display a unique image and to be able to have flexibility to display the image signal of various standards on a single display.

Regarding Claim 6, Okuda teaches when the plurality of unit display data are written to the picture displaying unit (Col. 3, Lines 44-47), at least one specific pixel among the plurality of pixels is used as a write start position (Col. 3, Lines 49-58) and the plurality of unit display data are written in accordance with an arrangement order of the plurality of pixels from the specific pixel, and wherein the specific pixel is changed for the each predetermined frame or frames (Col. 3, Line 64 to Col. 4, Line 25). Nakano et al. teaches during screen saver routine the rotating image stored in the memory, display in different part of the screen with different image, which changes data written to specific pixel frame to frame or predetermined frames (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3)

Regarding Claim 7, Nakano et al. teaches a part of the plurality of unit display data is changed before the part of the plurality of unit display data is read from the memory unit, and

wherein the plurality of unit display data including the changed part of the plurality of unit

display data are written to the picture displaying unit in the different order for the each

predetermined frame or frames (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to

Col. 16, Line 3) (during screen saver routine the CPU only accesses the screen saver program

where it is displaying rotating image stored in the memory, since different part of the image to be

displayed different position on the display it requires to read frame by frame basis information in

the different order and the display content in the picture displaying unit is different for the each

predetermined frame or frames).

Regarding Claim 8, Nakano et al. teaches a part of the plurality of unit display data is

changed before the part of the plurality of unit display data is read from the memory unit, and

wherein the plurality of unit display data including the changed part of the plurality of unit

display data are written to the picture displaying unit in the different order for the each

predetermined frame or frames (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to

Col. 16, Line 3) (during screen saver routine the CPU only accesses the screen saver program

where it is displaying rotating image stored in the memory, since different part of the image to be

displayed different position on the display it requires to read frame by frame basis information in

the different order and the display content in the picture displaying unit is different for the each

predetermined frame or frames).

Regarding Claim 9, Nakano et al. teaches the picture displaying unit is designed such that

lights of the picture displaying unit can be emitted in three colors of R, G and B, and wherein a

supply of currents to the plurality of data lines corresponding to at least one of the three colors of

R, G and B is stopped, such that the lights are emitted from the picture displaying unit in one or

two colors among the three colors of R, G and B (Col. 3, Line 63 to Col. 4, Line 12). (during

screen saver routine the CPU only accesses the screen saver program where it is displaying

rotating image stored in the memory, and screen saver routine to reduce the brightness, it is

obvious to one in the ordinary skill in the art display with less color to fade the image).


Regarding Claim 10, Nakano et al. teaches the picture displaying unit is designed such

that lights of the picture displaying unit can be emitted in three color of R, G and B, and wherein

a supply of currents to the plurality of data lines corresponding to at least one of the three colors

of R, G and B is stopped, such that the lights are emitted from the picture displaying unit in one

or two colors among the three colors of R, G and B (Col. 3, Line 63 to Col. 4, Line 12). (during

screen saver routine the CPU only accesses the screen saver program where it is displaying

rotating image stored in the memory, and screen saver routine to reduce the brightness, it is

obvious to one in the ordinary skill in the art display with less color to fade the image).


Regarding Claim 11, Nakano et al. teaches at least one of the three colors of R, G and B

is changed for the each predetermined frame or frames (during screen saver routine the rotating

image stored in the memory, display in different part of the screen with different image, which

changes data with color written to specific pixel frame to frame or predetermined frames (Col.

13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3).

Regarding Claim 12, Nakano et al. teaches the at least one of the three colors of R, G and B is changed for the each predetermined frame or frames (during screen saver routine the rotating image stored in the memory, display in different part of the screen with different image, which changes data with color written to specific pixel frame to frame or predetermined frames (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3).

Regarding Claim 13, Nakano et al. teaches the single display data is one of static picture data and dynamic picture data (Col. 1, Line 66 to Col. 2, Line 6).

Regarding Claim 14, Nakano et al. teaches the single display data is one of static picture data and dynamic picture data (Col. 1, Line 66 to Col. 2, Line 6).

Regarding Claim 17, Okuda teaches a method of driving (Col. 1, Lines 65-67) a picture displaying apparatus (Col. 1, Lines 6-10, Lines 15-18), comprising: (a) providing a picture displaying apparatus (Col. 1, Lines 6-10, Lines 15-18), which includes a picture displaying unit (Col. 1, Lines 6-10, Lines 15-18), having a plurality of light emission elements (Col. 2, lines 1-4), the plurality of light emission elements being disposed at a plurality of intersections composed of a plurality of scanning lines to which scanning signals are inputted, respectively and a plurality of data lines to which data signals are inputted, respectively (Col. 3, Lines 31-34, Lines 35-58); (b) providing a memory unit storing a single display data indicative of an display content of the picture displaying unit (Col. 3, Line 29), and wherein the memory unit has a plurality of memory cells (Col. 3, Lines 46-48), and wherein each of the plurality of memory

cells stores a unit display data of a part of the single display data (Col. 3, Lines 49-55), and wherein a plurality of the unit display data stored in the plurality of memory cells (Col. 3, Lines 46-55).

However, Okuda fails to teach (c) reading a plurality of the unit display data stored in the plurality of memory cells from the memory unit in a different order for each single predetermined frame or each plural predetermined frames; and (d) writing the plurality of unit display data to the picture displaying unit in a order when the plurality of unit display data are read from the memory unit, such that the display content in the picture displaying unit is different for the each predetermined frame or frames.

However, Nakano et al. teaches (c) reading a plurality of the unit display data stored in the plurality of memory cells from the memory unit in a different order for each single predetermined frame or each plural predetermined frames; and (d) writing the plurality of unit display data to the picture displaying unit in a order when the plurality of unit display data are read from the memory unit, such that the display content in the picture displaying unit is different for the each predetermined frame or frames (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3) (during screen saver routine the CPU only accesses the screen saver program where it is displaying rotating image stored in the memory, since different part of the image to be displayed different position on the display it requires to read frame by frame basis information in the different order and the display content in the picture displaying unit is different for the each predetermined frame or frames).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made

to incorporate teaching of Nakano et al. in Okuda teaching to be able to select and display a

unique image during screen saver program and protect the display screen from burn-in.

Okuda teaches a picture displaying apparatus (Col. 1, Lines 6-10, Lines 15-18).

However, Okuda fails to teach memory read from the memory unit in different order for

each single predetermined frame or each plural predetermined frames

However, Hashimoto et al. teaches memory read from the memory unit in different order

for each single predetermined frame or each plural predetermined frames (Col. 13, Lines 1-27,

Col. 13, Line 57 to Col. 14, Line 26, Col. 14, Lines 35-41).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made

to incorporate teaching of Hashimoto et al. in Okuda teaching to be able to select and display a

unique image and to be able to have flexibility to display the image signal of various standards

on a single display.


Regarding Claim 18, Nakano et al. teaches (e) changing a part of the plurality of unit

display data before the (c) is performed, and wherein at the (c), the plurality of unit display data

including the changed part of the plurality of unit display data are read from the memory unit in

the different order for the each predetermined frame or frames, and wherein at the step (d), the

plurality of unit display data including the changed part of the plurality of unit display data are

written to the picture displaying unit (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines

11 to Col. 16, Line 3) (during screen saver routine the CPU only accesses the screen saver

program where it is displaying rotating image stored in the memory, since different part of the

image to be displayed different position on the display it requires to read frame by frame basis

information in the different order and the display content in the picture displaying unit is

different for the each predetermined frame or frames).

4.      Claims 19,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuda

(6,380,689 B1) in view of Nakano et al. (6,043,818) and Sato et al. (5,903,707).

Regarding Claim 19, Okuda teaches a method of driving (Col. 1, Lines 65-67) a picture

displaying apparatus (Col. 1, Lines 6-10, Lines 15-18), comprising: (f) providing a picture

displaying apparatus (Col. 1, Lines 6-10, Lines 15-18), which includes a picture displaying unit

(Col. 1, Lines 6-10, Lines 15-18), having a plurality of light emission elements (Col. 2, lines 1-

4), the plurality of light emission elements being disposed at a plurality of intersections

composed of a plurality of scanning lines to which scanning signals are inputted, respectively

and a plurality of data lines to which data signals are inputted (Col. 3, Lines 31-34, Lines 35-58),

respectively, wherein the picture displaying unit (Col. 1, Lines 6-10, Lines 15-18), includes a

plurality of pixels corresponding to the plurality of light emission elements (Col. 2, lines 1-4);

(g) providing a memory unit storing a single display data indicative of an display content of the

picture displaying unit (Col. 3, Line 29), wherein the memory unit has a plurality of memory

cells, and each of the plurality of memory cells stores a unit display data of a part of the single

display data (Col. 3, Lines 46-48); (h) reading a plurality of the unit display data from the

plurality of memory cells (Col. 3, Lines 51-55); and (i) writing the read unit display data to each

of the plurality of pixels (Col. 3, Lines 49-51).

However, Okuda fails to teach the (i), the plurality of read unit display data are written to the picture displaying unit in a different order for each single predetermined frame or each plural predetermined frames, such that the display content in the picture displaying unit is c) different for the each predetermined frame or frames.

However, Nakano et al. teaches the (i), the plurality of read unit display data are written to the picture displaying unit in a different order for each single predetermined frame or each plural predetermined frames, such that the display content in the picture displaying unit is c) different for the each predetermined frame or frames. (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3) (during screen saver routine the CPU only accesses the screen saver program where it is displaying rotating image stored in the memory, since different part of the image to be displayed different position on the display it requires to read frame by frame basis information in the different order and the display content in the picture displaying unit is different for the each predetermined frame or frames).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Nakano et al. in Okuda teaching to be able to select and display a unique image during screen saver program and protect the display screen from burn-in.

Okuda teaches a picture displaying apparatus (Col. 1, Lines 6-10, Lines 15-18).

However, Okuda fails to teach memory read from the memory unit in different order for each single predetermined frame or each plural predetermined frames

However, Sato et al. teaches memory read from the memory unit in different order for each single predetermined frame or each plural predetermined frames (Col. 5, Lines 46-56, Col. 6, Lines 8-15).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Sato et al. in Okuda teaching to be able to select and display a unique image and to be able to minimize data movement and manipulation for video display and a dark line is not generated near the join portion where the divided frames are joined.

Regarding Claim 20, Nakano et al. teaches (j) changing a part of the plurality of unit display data before the (h) is performed, and wherein at the step (h), the plurality of unit display data including the changed part of the plurality of unit display data are read from the plurality of memory cells, and wherein at the-step (i), the plurality of unit display data including the changed part of the plurality of unit display data are written to the picture displaying unit in the different order for the each predetermined frame or frames (Col. 13, Lines 16-26, Col. 14, Lines 4-10, Col. 15, Lines 11 to Col. 16, Line 3) (during screen saver routine the CPU only accesses the screen saver program where it is displaying rotating image stored in the memory, since different part of the image to be displayed different position on the display it requires to read frame by frame basis information in the different order and the display content in the picture displaying unit is different for the each predetermined frame or frames).

5.      Claims 15,16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuda (6,380,689 B1) in view of Nakano et al. (6,043,818) and Hashimoto et al. (6,072,457) as applied to claims 1-14, 17,18 above, and further in view of Ge et al. (5,347,292).

Regarding Claim 15, Okuda et al. modified by Nakano et al. teaches the light emission element is one of an EL element (Col. 1, Line 60 to Col. 2, line 4).

However, Okuda et al. modified by Nakano et al. and Guillemaud et al. fails to teach a light emitting diode and an FED.

However, Ge et al. teaches a light emitting diode and an FED (Col. 1, Lines 37,38, Col. 2, Lines 60-64, Col. 3, Lines 57-63).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of GE et al. in Okuda et al. modified by Nakano et al. and Hashimoto et al. teaching to be able to improve brightness, contrast and resolution in an optical device display.


Regarding Claim 16, Okuda et al. teaches the light emission element is one of an EL element (Col. 1, Line 60 to Col. 2, line 4). Ge et al. teaches a light emitting diode and an FED (Col. 1, Lines 37,38, Col. 2, Lines 60-64, Col. 3, Lines 57-63).


6.     The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is informed that all of the other additional cited references either anticipate or render the claims obvious. In order to not to be repetitive and exhaustive, the examiner did draft additional rejection based on those references.

*Response to Arguments*

7.      Applicant's arguments with respect to claims 1-20 have been considered but are moot in

view of the new ground(s) of rejection.

*Conclusion*

8.      The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

        Fukuma et al. (4,737,782) Liquid crystal display drive circuit with variable sequence of

back-plane scanning variable duty factor.

9.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Prabodh M Dharia whose telephone number is 703-605-1231.

The examiner can normally be reached on M-F 8AM to 5PM.

10.     If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bipin Shalwala can be reached on 703-3054938.  The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

11.     Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system.  Status information for published applications

may be obtained from either Private PAIR or Public PAIR.  Status information for unpublished

applications is available through Private PAIR only.  For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

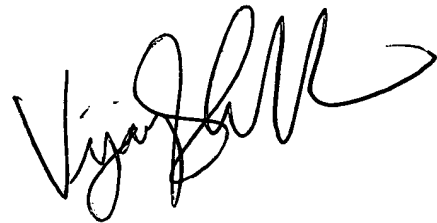Any response to this action should be mailed to:

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January 03, 2005

**VIJAY SHANKAR**
**PRIMARY EXAM**